CLAIMS

What is claimed is:

1. In a system which supports code division multiple access communication among members of a first group of terminals and among a second group of terminals, a method comprising the steps of:

assigning to the first group of terminals a first code, each user of the first group being unique identifiable by a unique code phase offset;

assigning to the second group of terminals the same code as used by the first group but each user of the second group using a common phase offset of that code; and

assigning to each user of the second group an additional code, the additional code being unique for each of the terminals of the second group.

2. A method as in claim 1 wherein the code assigned to the first group of terminals is a common chipping rate code.

3. A method as in claim 1 wherein the additional codes assigned to the second group of terminals are a set of unique, orthogonal codes.

4. A method as in claim 1 wherein the code assigned to the first group of terminals is a unique, non-orthogonal scrambling sequence.

5. A method as in claim 1 wherein the first group of terminals uses scrambling codes that are unique phase shifts of a larger pseudorandom noise sequence.

6. A method as in claim 1 wherein the second group of terminals use additional codes that are a set of unique orthogonal codes.

7. A method as in claim 6 wherein the unique orthogonal code is used to scramble the transmissions of the second group of terminals at an indicated chip rate.

8. A method as in claim 7 wherein the transmission timing for the second group of terminals is synchronized to allow transmissions from the second group of terminals to be orthogonal to one another.

9. A method as in claim 1 wherein the two groups of terminals employ radio frequency modulation that is different from each other.

10. A method as in claim 1 wherein the two groups of terminals employ the codes in different spreading techniques.

11. A method as in claim 10 wherein the first group of terminals uses pairs of the codes as respective inputs to an in-phase and quadrature modulator.

12. A method as in claim 10 wherein the second group of terminals use the assigned additional codes as short scrambling codes.

13. A method as in claim 1 wherein a first group of terminals receives periodic timing adjustment information over a first link direction to provide for timing adjustment for a second link direction.

14. A method as in claim 13 wherein the second group of terminals do not receive such periodic timing adjustment information.

15. A method as in claim 1 wherein the second group of terminals use an additional code which is a short length orthogonal code.

16. A method as in claim 1 wherein the second group of terminals use an additional code which is a short length, bit augmented pseudorandom noise sequence.

17. A method as in claim 1 wherein the codes assigned to the first group of terminals and the additional codes assigned to the second group of terminals are used to encode transmissions on a reverse communication link between remotely located wireless terminals and a centrally located wireless base station.

18. A method as in claim 1 wherein the first group of terminals are legacy cellular telephone terminals.

19. A method as in claim 18 wherein the first group of terminals are assigned codes according to a CDMA cellular telephone standard specification.

20. A method as in claim 19 wherein the CDMA cellular telephone standard specification is selected from the group consisting of IS-95 and CDMA-2000.

21. A method as in claim 18 wherein the second group of terminals are used in a wireless data communication system.

22. A method as in claim 21 wherein the additional codes assigned to the second group of terminals are a set of common chip rate scrambling codes.

23. A method as in claim 22 wherein the additional codes are scrambling codes that repeat every N chips, where N is an even number in a range from 128 to 32768 chips.

24. A wireless communication system comprising a first set of access units and a second set of access units, the first set of access units and the second set of

access units capable of communicating with a central base station wherein the first set of access units use a chip rate scrambling code to separate their user channels, each individual unit of the first set of access units having at least one unique, non-orthogonal scrambling sequence that is selected from a unique phase shift of a longer pseudorandom noise sequence, and wherein the second group of access units share a common chip rate scrambling code that is not used by the first group of access units.

25. The wireless communication system of claim 24 wherein each unit of the second set is assigned at least one unique orthogonal code.

26. The wireless communication system of claim 24 wherein the chip rate transmissions of the second set of access units are scrambled by the bits of the orthogonal code at a chipping rate.

27. The wireless communication system of claim 24 wherein the transmission timing of the second set of access units is controlled such that their transmissions are orthogonal to each other.

28. The wireless communication system of claim 24 wherein the scrambling code is 2^{42} chips in length.

29. The wireless communication system of claim 24 wherein the first set of access units and the second set of access units employ different modulation techniques.

30. The wireless communication system of claim 24 wherein the first set of access units and the second set of access units employ different spreading techniques.

31. The wireless communication system of claim 30 wherein the first set of access units employ complex in-phase and quadrature spreading.

32. The wireless communication system of claim 31 wherein the complex in-phase and quadrature spreading uses two different scrambling codes.

33. The wireless communication system of claim 32 wherein the two different scrambling codes are 2^{15} in length.

34. The wireless communication system of claim 32 wherein the two different scrambling codes comprise an in-phase (I) code and a quadrature (Q) code.

35. The wireless communication system of claim 31 wherein the second set of access units use a scrambling code that is 2^{15} in length.

36. The wireless communication system of claim 24 wherein the access units are using the assigned codes to format signals for a reverse link communication signal.